STATUS OF THE CLAIMS

1. **(Currently amended)** A DC voltage generator comprising:
   a digital pulse modulation (DPM) generator ~~for~~ generating a periodic bit-stream preconfigured to ~~encoding~~ encode a desired DC voltage level in the average value of the bit-stream; and
   an analog averaging circuit ~~for~~ receiving and decoding the periodic bit-stream ~~for generating~~ so as to generate an average DC voltage corresponding to the desired DC voltage level.

2. **(Original)** The DC voltage generator of claim 1 wherein the DPM generator comprises a memory based periodic bit-stream generator circuit.

3. **(Currently amended)** The DC voltage generator of claim 2 wherein the DPM generator comprises a programming means for selecting the bit-stream encoding the desired DC voltage level.

4. **(Currently amended)** The DC voltage generator of claim 1 wherein the DPM generator comprises a pulse density modulation (PDM) generator circuit for encoding the desired DC voltage level in a PDM periodic bit-stream.

5. **(Currently amended)** The DC voltage generator of claim 1 wherein the DPM generator comprises a pulse width modulation (PWM) generator circuit for encoding the desired DC voltage level in a PWM periodic bit-stream.

6. **(Currently amended)** The DC voltage generator of claim 1 wherein the DPM generator is memory based and comprises:
   a circular shift register having means for receiving a series of bits encoding ~~a~~ the desired DC voltage level in a bit-stream; means for serially outputting the bits and means for circling the series of bits output to the means for receiving.

7. **(Currently amended)** The DC voltage generator of claim 6 wherein the DPM generator further comprises a programming means for selecting the series of bits encoding the desired DC voltage level, said programming means providing the bit-stream to the means for receiving of the circular shift register.

8. **(Original)** The DC voltage generator of claim 6 wherein the bit-stream is a pulse density modulation bit-stream.

9. **(Original)** The DC voltage generator of claim 6 wherein the bit-stream is a pulse width modulation bit-stream.

10. **(Original)** The DC voltage generator of claim 7, wherein the programming means comprises a software based ΣΔ modulator.

11. **(Withdrawn)** The DC voltage generator of claim 1 wherein the DPM generator is memory based and comprises a linear feedback shift register.

12. **(Withdrawn)** The DC voltage generator of claim 4 wherein the PWM generator is memory based and comprises:
    a counter for outputting a count; and
    a comparator for receiving the count, comparing the count to a reference value, and outputting the PWM periodic bit-stream in response to the comparison of the count and reference value.

13. **(Withdrawn)** The DC voltage generator of claim 1 wherein the DPM generator is an automated test equipment.

14. **(Original)** The DC voltage generator of claim 1 wherein the analog averaging circuit comprises a capacitor and resistor for generating the average DC voltage.

15. **(Currently amended)** The DC voltage generator of claim 1 further comprising control means for varying the periodic bit-stream whereby the desired DC voltage level is controlled for temperature compensation.

16. **(Withdrawn)** The DC voltage generator of claim 15, wherein the control means comprises means for varying a bit rate of the periodic bit-stream.

17. **(Withdrawn)** The DC voltage generator of claim 1 further comprising asynchronous control means for asynchronously controlling the DPM generator.

18. **(Original)** The DC voltage generator of claim 1 wherein the DPM generator and analog averaging circuit are co-integrated on a chip.

19. **(Currently amended)** A method of generating a desired DC voltage comprising the steps of:

selecting a desired DC voltage level;

generating a periodic bit-stream encoding ~~a~~ the desired DC voltage level in an average value of the periodic bit-stream; and

averaging the periodic bit-stream to decode and produce ~~the~~ a DC voltage corresponding to the desired DC voltage level.

20. **(Original)** The method of claim 19 wherein the step of generating comprises programming the periodic bit-stream in a memory and serially outputting the bit-stream.

21. **(Currently amended)** The method of claim 20 ~~wherein the memory comprises a circular shift register~~further comprising the step of encoding the desired DC voltage level in a series of bits and the step of generating includes periodically cycling through the series of bits so as to generate the periodic bit-stream.

22. **(Withdrawn)** The method of claim 20 wherein the memory comprise a linear feedback shift register.

23. **(Currently amended)** The method of claim 20 wherein the memory is provided by ~~an~~ automated test equipment.

24. **(Currently amended)** The method of claim 20 ~~wherein the periodic bit-stream is~~further comprising the step of encoding the desired voltage level in a pulse width modulation or a pulse density modulation bit stream.

25. **(Currently amended)** The method of claim 19 wherein the step of generating comprises the steps of:

~~Cyclically~~ cyclically counting a counter value;

~~Comparing~~ comparing the counter value to a reference value; and

~~Outputting~~ outputting a bit-stream value in response to the comparison of the counter value and reference value.

26. **(Original)** The method of claim 19 whercin thc step of averaging comprises filtering the periodic bit-stream.

27. **(Currently amended)** The method of claim 19 further comprising the step of controlling the periodic bit-stream to control the DC voltage ~~level~~ for temperature compensation.

28. **(Withdrawn)** The method of claim 27 wherein the step of controlling comprises varying a bit rate of the periodic bit stream.

29. **(Withdrawn)** The method of claim 19 further comprising the step of asynchronously controlling the generation of the periodic bit stream.

30. **(New)** The DC voltage generator of claim 2 wherein the memory based period bit stream generator circuit includes a memory, operatively configured to contain a series of bits, and a cycling circuit operatively configured to cycle the series of bits so as to generate the periodic bit-stream.

31. **(New)** A DC voltage generator comprising:

a digital pulse modulation generator that includes:

a memory operatively configured to store a series of bits that encodes a desired DC voltage level as the average value of the series of bits; and

cycling circuitry operatively configured to cycle the series of bits so as to generate a periodic bit-stream; and

an analog averaging circuit for receiving and decoding the period bit-stream so as to generate an average DC voltage corresponding to the desired DC voltage level.

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